

Amendments to the Specification:

Pages 1-2:

Please substitute the following paragraph for the paragraph beginning at page 1, line 20 through page 2, line 9:

A front teleconverter that is attached to the ~~image~~ object side of an imaging lens for varying the focal length of the whole lens system to the longer side has been known to be used for a still camera, a video camera, and the like. Generally, this kind of front teleconverter is composed of, in order from the object, a first lens group having positive refractive power, and a second lens group having negative refractive power, where the focal points of respective lens groups are arranged to substantially coincide with each other forming an afocal lens system that collimated light incident to the object side exits as collimated light. An example of the conventional front teleconverter lens system that is composed of, in order from the object, a single positive lens having positive refractive power and a single negative lens having negative refractive power is disclosed in Japanese Laid-Open Patent Application No. 63-210810. The construction of the lens is relatively simple.

Pages 7-8:

Please substitute the following paragraph for the paragraph beginning at page 7, line 8 through page 8, line 21:

In the optical system forming the front teleconverter, a Kepler type and a Galilean type have been known. The Galilean type optical system has a lens configuration composed of, in order from the object, a first lens group having positive refractive power and a second lens group having negative refractive power, in which the image side focal point of the first lens group and the object side focal point of the second lens group coincide with each other. Consequently, a bundle of parallel light incident from the object side exits from image side as a bundle of parallel light with decreasing its diameter after passing through the front teleconverter. Accordingly, the teleconverter lens is called an afocal converter and the afocal magnification M of the Galilean type front teleconverter is defined by the following expression (a):

$$M = f_F / |f_R| \quad (a)$$

where f_F denotes the focal length of the first lens group, and f_R denotes the focal length of the second lens group. Here, even if the image side focal point of the first lens

group and the object side focal point of the second lens group do not coincide with each other, the afocal magnification M is defined as the ratio of the inclination angle of paraxial ray in exit side θ_{out} to that in incident side θ_{in} , that is $M = |\theta_{out} / \theta_{in}|$. The M value is derived by paraxial ray trace calculation of the lens data part of the front teleconverter lens system. In other words, the afocal magnification of the front teleconverter is determined from parameters of each lens of the front teleconverter regardless of the imaging lens. Practically, the image side focal position of the first lens group and the object side focal position of the second lens group are not necessary to closely coincide with each other. At least one of the first lens group and the second lens group is moved along the optical axis for focusing, or these focal positions may be located close within a range capable of focusing by the rear lens (imaging lens). Even if these focal positions do not coincide rigorously, the afocal magnification is to be thought as the ratio of the inclination angle of the paraxial ray in the exit side to that in the incident side. In this case, the afocal magnification varies from the expression (a), but the varying amount is trifling. When these focal positions rigorously coincide with each other, the focal length of the combined lens system composed

of the front teleconverter lens system and the imaging lens (whose focal length is to be f) locating to the image side of the front teleconverter lens system is given by $M \times f$. On the other hand, when these focal positions do not coincide with each other, the focal length of the combined lens system somewhat varies from the value $M \times f$. The focal length of the combined optical system (the front teleconverter lens system and the imaging lens) can be calculated by paraxial ray trace calculation₇.

Pages 9-10:

Please substitute the following paragraph for the paragraph beginning at page 9, line 21 through page 10, line 3:

In the present invention, a diffractive optics, in other words a diffraction grating or a Fresnel zone plate for deflecting a light ray producing diffraction effect, is formed on ~~a~~ an optical surface made of glass or plastic to obtain superb optical performance. Fig. 9 is an example of a Fresnel zone plate. Fig. 9A is a plan view of the example of a Fresnel zone plate looked from the optical axis. Fig. 9B is a cross sectional view of the Fresnel zone plate of Fig. 9A sectioned by B-B line. The Fresnel zone plate shown in Fig. 9 is a Kinoform type that has continuous curvature on

each pitch surface of the diffraction grating forming the diffractive optical surface. By the way, these diffractive optical elements are shown in detail in "*Introduction to Diffractive Optical Elements*", supervised by The Optical Society of Japan, (OPTRONICS, 1997).

Page 13:

Please substitute the following paragraph for the paragraph beginning at line 5:

In the front teleconverter lens system according to the present invention, it is preferable that the angle to incident to the diffractive optical element is as small as possible like general optical systems having a diffractive optical surface. This is because when the incident angle becomes large, flare tends to be produced on the diffractive optical surface to degrade optical performance. Accordingly, in the front teleconverter lens system according to the present invention, in order to suppress the effect of flare to obtain superb optical performance, the incident angle of the principal ray reaching the maximum image height to the diffractive optical surface should be 15 degrees or less, or more preferably, 10 degrees or less. In other words, it is desirable that the diffractive optical surface is formed on the lens surface on which light is incident with the angle

of 15 degrees or less (more preferably 10 degrees or less.) Although the diffractive optical surface can be formed on any lens surface as long as these conditions are satisfied, these conditions can be easily satisfied when it is formed on any one surface of a lens having a convex surface facing to the object among the lens surfaces composing the front teleconverter.

Pages 21-22:

Please substitute the following paragraph for the paragraph beginning at page 21, line 7 through page 22, line 1:

Fig. 1 is a diagram showing a combined optical system constructed by a front teleconverter lens system combined with an imaging lens according to Example 1 of the present invention. Fig. 2 is a diagram showing the front teleconverter lens system of the combined optical system. Fig. 3 is a diagram showing the imaging lens of the combined optical system. As shown in Figs. 1 and 3, the imaging lens ML used in the combined optical system according to Example 1 is composed of, in order from an object, a cemented positive lens constructed by a negative meniscus lens L1 having a convex surface facing to the object cemented with a biconvex positive lens L2, a positive meniscus lens L3

having a convex surface facing to the object, a negative meniscus lens L4 having a convex surface facing to the object, a cemented negative lens constructed by a biconcave negative lens L5 cemented with a positive meniscus lens L6 having a convex surface facing to the object, a positive meniscus lens L7 having a convex surface facing to the object, an aperture stop P8, a biconvex positive lens L9, a positive meniscus lens L10 having a convex surface facing to the object, a biconcave negative lens L11, a cemented positive lens constructed by a negative meniscus lens L12 having a convex surface facing to the object cemented with a biconvex positive lens L13, a cemented positive lens constructed by a biconvex positive lens L14 cemented with a biconcave negative lens L15, and two filters F16 and ~~F17~~ F17 each composed of a plane parallel ~~grass~~ glass.

Pages 27-28:

Please substitute the following paragraph for the paragraph beginning at page 27, line 21 through page 28, line 12:

Fig. 5 is a diagram showing a combined optical system constructed by a front teleconverter lens system combined with an imaging lens according to Example 2 of the present invention. Fig. 6 is a diagram showing the front

teleconverter lens system of the combined optical system. As shown in Figs. 5 and 6, the front teleconverter lens system TC according to Example 2 is composed of a first lens group FL having positive refractive power and a second lens group RL having negative refractive power. The first lens group FL is composed of a cemented positive lens constructed by, in order from the object, a negative meniscus lens L201 having a convex surface facing to the object cemented with a biconvex positive lens L202 on the ~~object~~ image side surface of which a diffractive optical surface is formed. The second lens group RL is composed of a cemented negative lens constructed by, in order from the object, a positive meniscus lens L203 having a concave surface facing to the object cemented with a biconcave negative lens L204. The image side surface (concave surface) of the negative meniscus lens L201 and the object side surface (convex surface) of the biconvex lens L202 form a pair of a convex surface and a concave surface adjacent with each other with ~~an air-space~~ cement there between. The imaging lens ML is the same as Example 1 (see Fig. 3).